Theoretical data and graphical methodological recommendations on the teaching of fortifications topics

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ABSTRACT

In this article, theoretical data and graphic methodological recommendations on the teaching of the forty topics are given.

Keywords forty,simple,forty, frontal, horizontal, profile, complex forty, local forty.

Introduction

Forty is a conditional image, which is performed in order to determine the internal structure of the work that is not visible to our eyes. As you know, in the drawings, invisible lines on the inside of the objects are drawn with barcode lines. Adjacent to the Bunda and the drawing of the barcode in one drawing at a time makes it difficult to read the drawing and often leads to errors. To eliminate such a case, the barcode will be replaced by contour lines, which will be visible, that is, forty will be given.

It is said that the image formed when projecting an object behind the cutting plane of a piece with the shape formed in the plane of the cut when the figure is forty with one or more planes. Forty is described mainly in the appearance of the workpiece.

The difference from the cut of the Forty is that in the cut the part that is visible behind the cutting plane of the piece is not drawn.

Figure 1 shows detail A in A and b by comparing the forty and the cross section formed when cutting with a plane.
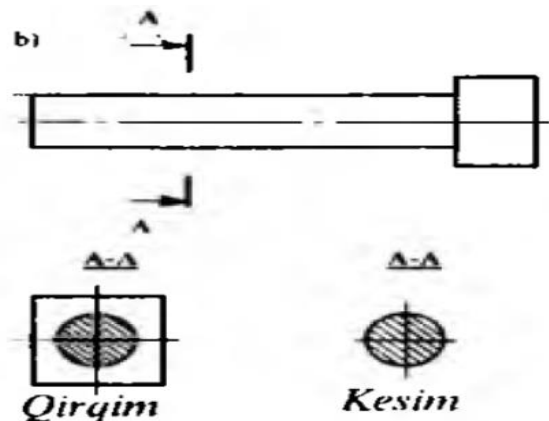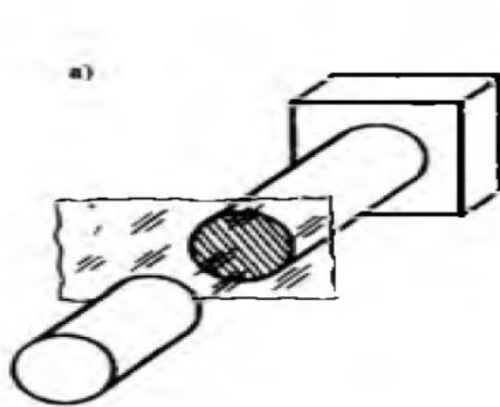

Figure 1

Forty is divided into the following according to several properties:

1. Simple and complex forty, depending on the number of the cutting plane.

2. According to the situation of the cutting plane relative to the horizontal plane, it is vertical, horizontal and inclined forty.

3. Forty done on the length or cross-section of the piece.

4. Full and Local (some place) forty, according to the full execution of forty.

Ordinary forty. Forty, formed by a single cutting plane in the drawing, is called a simple forty.[1]

Depending on the location of the normal forty-cutting plane relative to the projection plane, it is divided into horizontal, vertical and oblique (inclined) forty. If the plane of the cutting is parallel to the plane of the frontal projection is called the The frontal is called the forty (in Figure 2 A-a forty). The projection plane of a cutting plane profile is called parallel profile forty (in Figure 2 B-B forty).
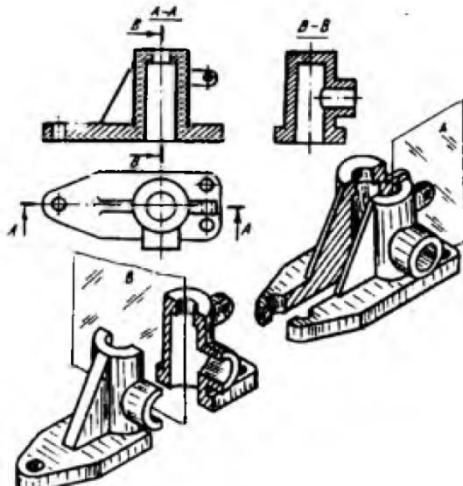

Figure 2

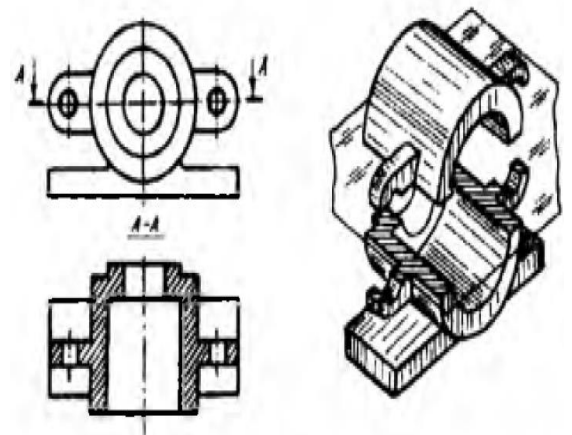Horizontal Forty is formed by means of a horizontal cutting plane (Figure 3).

Figure 3

The Frontal, profile and horizontal forties are usually drawn by placing them appropriately on the spine of the views from the front, the chap and the top. When the scraps are done, too, as in the cross section, inscriptions and arrows are put, and the cut surface of the piece is stitched.

If the drawing is done forty in one view, then this Forty is only inclined to the same view and does not affect other views. For example, in the 2-th picture, the forty performed on the head and the appearance from the chap did not have any effect on the appearance from the top.

Forty, which is done by the length or height of the piece, is called the longitudinal forty (in Figure 2 A-a forty). Forty performed by means of a cutting plane, which is in the case of a perpendicular to the length or height of the piece, is called a transverse forty (in Figure 2, B-B forty).

[1] Тураев X. А. АЙЛАНИШ СИРТЛАРИНИНГ СОЯЛАРИНИ ЯСАШ ОРҚАЛИ ТАЛАБАЛАРНИНГ ФАЗОВИЙ ТАСАВВУРИ ВА ТАФАККУРИНИ РИВОЖЛАНТИРИШГА ОИД МЕТОДИК ТАВСИЯЛАР //Science and Education. – 2020. – Т. 1. – №. 8.

In addition to this, in the drawings, in some cases, the deviation is done forty. If the cutting plane is at an acute angle to one of the projection planes, for example, in relation to the horizontal plane, a deviation of forty is formed in the piece (Figure 4). The deviation is allowed to place the forty in the empty place of the drawing and twist it as necessary. Bunda A-A is placed next to the Sign "O" (Figure 4, b).[2]
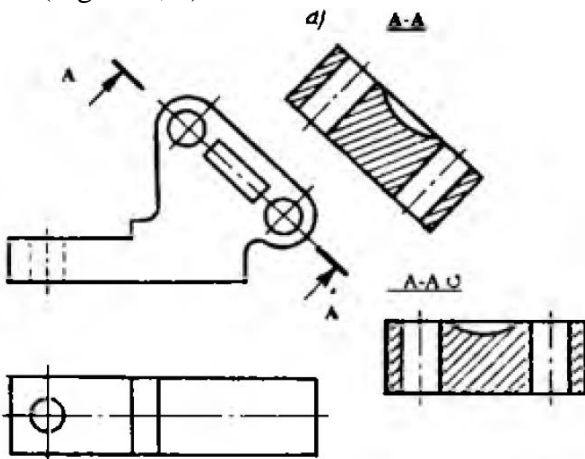

Figure 4

Local forty. Forty local (some place), which is performed in order to determine the structure of a small part of the piece, is called Forty. Mahali Forty is necessary to be confined to a thin undulating adjacent line. But this line should not be combined with any other line of the image. In Figure 5, it was done to indicate the interior of the local fortification detail, that is, the thickness of the cylindrical hole and Wall.
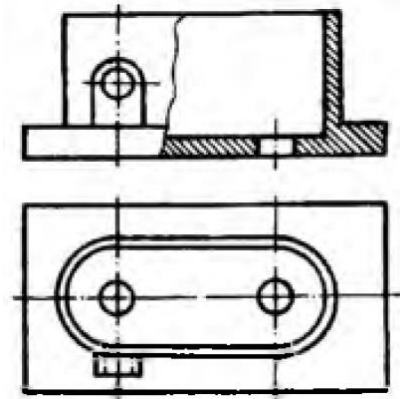

Figure 5

The triple plane, which cuts out the detail in the form, is interspersed with the parallel, and the frontal projection plane. Forty with complex paws can be horizontal, frontal and profile forties, like ordinary forties. Figure 6 shows a forty with a frontal paw.
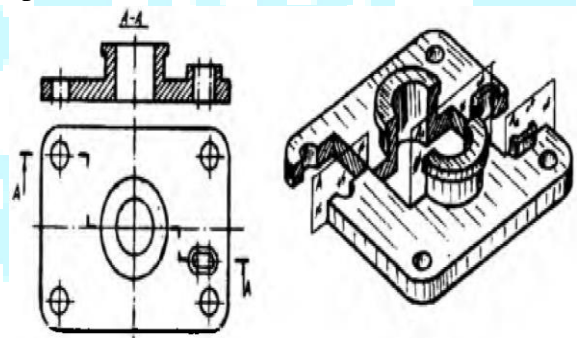

Figure 6

If the cutting plane intersects and forms an angle, then a broken Forty is formed (Figure 7). When the projection of such a forty given detail is drawn, a single flat surface is formed around the cross-sectional line of the conditionally intersecting planes, and the rotation is described as shown in 7, until one of the main projection planes reaches the parallel position. Fracture forty can be frontal, horizontal and profiled, like all forty. Frontal fracture in Figure 7 forty is shown.

[2] Turayev X. A. et al. YIG'MA BIRLIK CHIZMALARINI O'QISHDA TALABALARNING FAZOVIY TASAVVURINI RIVOJLANTIRISHGA OID ILMIY VA METODIK TAVSIYALAR //Молодой исследователь: вызовы и перспективы. – 2018. – С. 242-246.
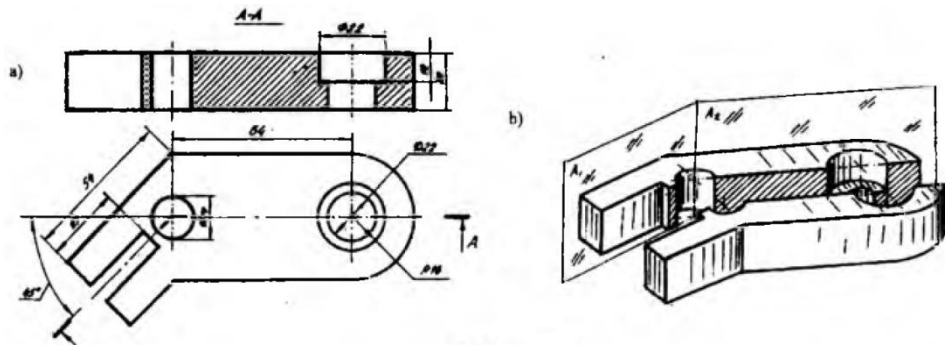
Figure 7

Separate cases of execution of forty. K combine a part of forty with a part of a niche. Sometimes it is possible to draw (depict) by combining a part of the Forty with a part of the vision, if it is necessary to simultaneously indicate the external and internal structure of the piece.

If in the drawing the image (appearance) of the workpiece is symmetrical, then part of the view (for example, frontal forty with the appearance from the front) is depicted by combining (Figure 8). In the figure, a thin Barrow-punched line, that is, the axis of symmetry, combines a part of the frontal edge with a part of the frontal view.
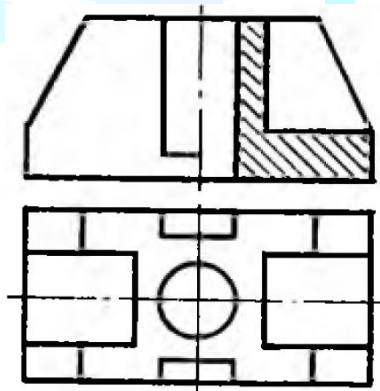

Figure 8

If in the drawing the axis of symmetry falls on top with a contour line, then the " quot; parts of the Forty with a K Cross are combined using a thin taiqinsim on line.

Figure 9 shows the cases of transferring symmetrical objects waveform line in comfortable situations.[3]
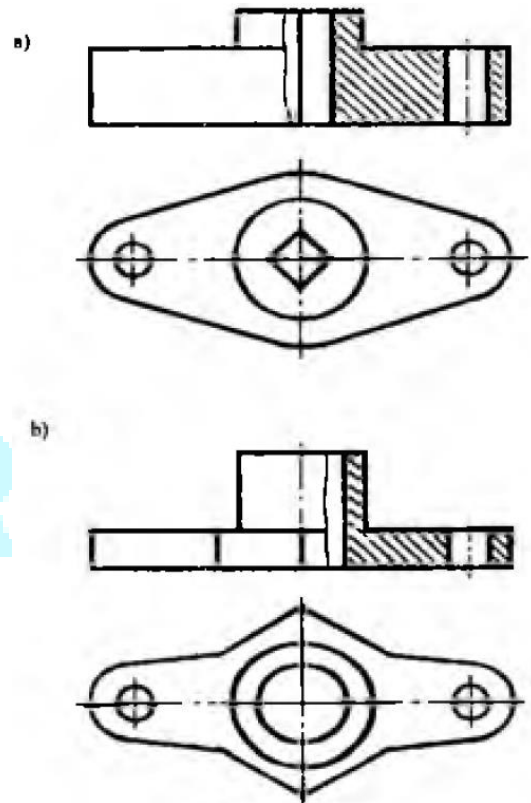

Figure 9

Many items have their own constructive elements, such as ribs, kegay (figure 10). Their peculiarity in the execution of forty of such an object is that the cutting plane does not have a cut shape, even when cutting along the rib or kegay. They are distinguished by the main line from other parts of the detail. In Figure 10, the frontal cutting

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plane intersects the rib, but in the frontal edge the rib is not stranded and is separated from the other part of the piece by the main adjoining line.
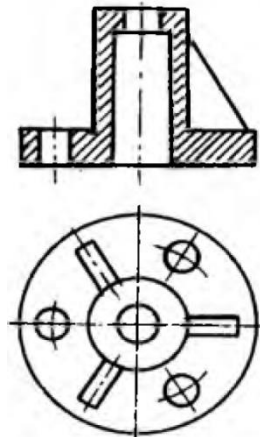

Figure 10

Figure 11

In Figure 11, the figure describes the parallel situation of the frontal plane by turning the kegay, but it is not drawn even if it is considered that the kegay passes through the cutting plane. When stripping, he would not have given a correct idea about kegay. In addition, in appearance, it is not necessary to display some of the items, all its elements taiiq, as shown in Figure 11, b, it is enough to indicate the number of parts and elements of it.
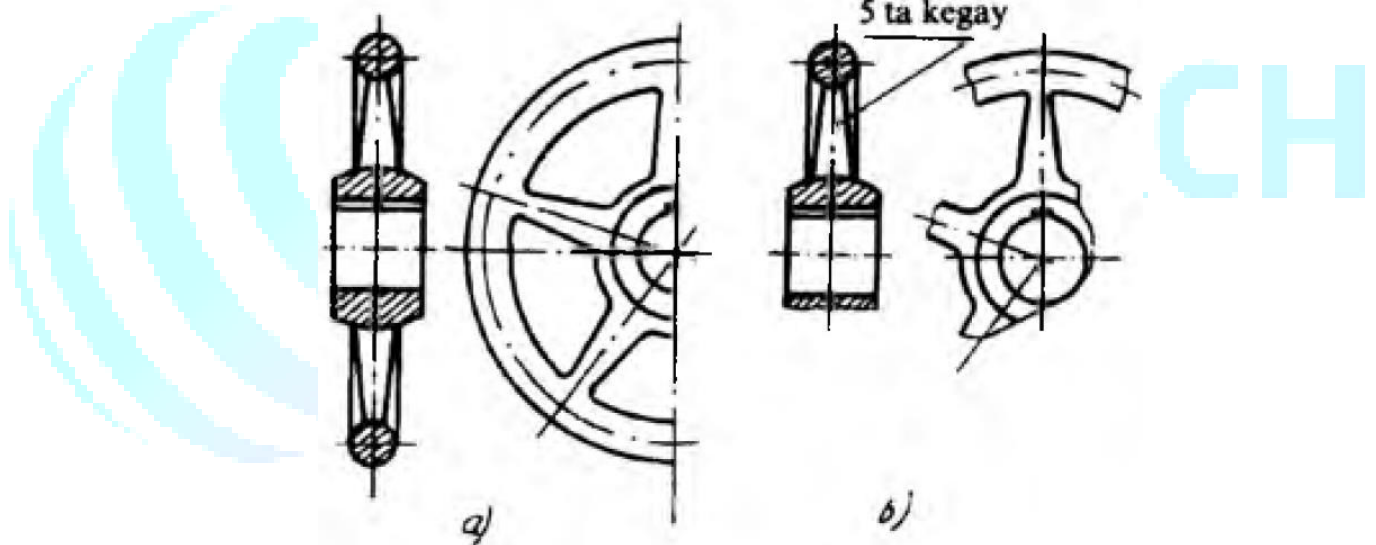
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